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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	
Federal-State Joint Board on Universal Service	CC Docket No. 96-45
Forward-Looking Mechanism for High Cost Support for Non-Rural LECS	CC Docket No. 97-160

COMMENTS OF BELL ATLANTIC[1] ON INPUTS, EXPENSES, AND OTHER ISSUES

In the attached comments, Bell Atlantic provides its views on the platform issues raised in Sections III.C.5, 7, 8 and III.D, and on input values.

These comments should not be taken as an endorsement of the use of a proxy model to determine the level of universal service support, or as a recognition that a proxy model that uses any particular types of inputs would produce valid data that could be used for regulatory purposes. Even with reasonable inputs, a proxy model can produce unrealistic results. For example, the New York Public Service Commission has rejected the Hatfield model because, *inter alia*, the model produces costs that are only about 20%

[1] The Bell Atlantic telephone companies ("Bell Atlantic") are Bell Atlantic-Delaware, Inc.; Bell Atlantic-Maryland, Inc.; Bell Atlantic-New Jersey, Inc.; Bell Atlantic-Pennsylvania, Inc.; Bell Atlantic-Virginia, Inc.; Bell Atlantic-Washington, DC, Inc.; Bell Atlantic-West Virginia, Inc.; New York Telephone Company; and New England Telephone and Telegraph Company.

of the cost of New York Telephone's existing network in Manhattan, despite the fact that both the model and New York Telephone's network are based on almost 100% copper infrastructure in that area.[2]

In addition, the model sponsors propose to include significant "enhancements" to their model platforms. Until all commenters have had a chance to test the new versions of these models with the proposed inputs, it is impossible to determine whether the models produce reasonable results, regardless of whether the inputs are reasonable. For this reason, the Commission should not adopt any model without giving the industry a further opportunity to comment on the final model selected, including the Commission's proposed inputs.

Bell Atlantic continues to advocate use of actual forward looking costs to determine universal service support levels in each area. GSA labels the term "actual forward-looking cost" an oxymoron, and questions exactly what this term means.[3] GSA is incorrect in assuming that it means either the use of past costs with future technology, or past technology with costs extrapolated to the future. The term refers to the calculation of forward-looking costs based on carrier-specific studies of providing service in each area using the existing network design with the latest, most efficient technology and forward-looking cost inputs.

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[2] ***See*** Reply Comments of New York State Department of Public Service, filed October 2, 1997, Attachment I, Case 95-C-0657, Opinion and Order Concerning Petitions for Rehearing of Opinion No. 97-2, issued September 22, 1997, at p. 28 ("NYPDS Reply").

[3] ***See*** Reply Comments of the General Services Administration, filed October 3, 1997, at p. 5.

In contrast to proxy models, which calculate the costs of a hypothetical network that cannot be built, and never will be built, an actual forward-looking cost study examines the costs that a carrier would incur in the future to provide a service.[4] While a forward-looking cost study still does not represent the actual costs that a carrier will incur at a particular time to provide universal service (since no network at any given point in time will contain the most modern, least-cost technology available), it is superior to a cost study that relies upon a purely hypothetical network design.

The state regulatory commissions have a great deal of experience with forward-looking economic cost studies that could be used as a basis for calculating universal service support. The Commission should use the results of carrier-specific state cost studies, rather than proxy models, to develop the level of universal service support in each area.

Respectfully submitted,

The Bell Atlantic Telephone Companies

By: _____
Joseph Di Bella

Edward D. Young, III
Michael E. Glover
Betsy L. Roe
Of Counsel

1320 North Court House Road
Eighth Floor
Arlington, VA 22201
(703) 974-6350

Their Attorney

Dated: October 17, 1997

[4] ***See*** NYPDS Reply, Attachment I at p. 6.

III.C.2(g)(2) Poles, Anchors, Guys, Aerial Cable and Building Attachment Input Values (paras. 110-113)

A proxy model should recognize that pole installation costs vary with terrain. The major variables are proximity to the road (i.e., whether the area can be accessed with pole setting trucks) and soil conditions. In some rural areas, pole lines are placed in areas inaccessible to trucks, and poles have to be transported and set with other, less efficient, methods. Soil conditions can also affect placement costs. In some areas with hard rock, contractors need to be hired to blast the hole before a pole can be placed. Accordingly, a model should include an algorithm that would vary pole installation costs by type of terrain.

A proxy model should also provide an input for pole spacing, which has a significant effect on the total cost of aerial plant. Pole spacing is a variable of the size of the pole placed, the load placed on the pole by its attachments, and property lot size. The latter is very important in suburban and urban areas, and it is ignored by both BCPM and Hatfield. Customers usually will not accept placement of a pole in the middle of their property. That is one reason why poles are typically placed on the property line. The other advantage of placing a pole on the property line is that it is easier to run a drop wire to the 4 property locations (2 on either side of the pole and the 2 across the street) that typically meet at suburban/urban property line. For these reasons, a pole might be placed

every 100 feet for a property that is 100 feet wide. For property that is 60 feet wide, poles might be placed at every other property line, or 120 feet apart.

III.C.2(g)(3) Network Interface Device Input Values (para. 115)

There are several types of network interface devices ("NIDs") that telephone companies use, depending on the type of application. As an example, since there are usually more pairs in a buried service wire than in an aerial drop wire that would be used to the same home, a NID used to terminate a buried service wire might accommodate 6 pairs as opposed to 2 pairs in the aerial application. Likewise, a NID used in a business application may vary from that used in a typical residential application. The selected mechanism should incorporate all of these distinctions. In addition, NID costs should include all of the work operations for proper installation, such as running a ground wire to an approved ground.

III.C.2(g)(4) Service Area Interface Input Values (para. 117)

A proxy model should calculate the size of the service area interface ("SAI") as a function of two variables: the amount of feeder facilities required to serve the distribution area, and the ratio of distribution facilities to feeder facilities. An SAI in a buried environment will typically be larger than an SAI in an aerial environment, because more distribution pairs are provisioned to living units served with buried cable than those

served with aerial cable.[5] As there is spare capacity built into the SAI (especially on the distribution side), the SAI cost calculation should include utilization (fill) factors.

Indoor and outdoor SAIs are different pieces of equipment with different costs, and the selected mechanism should distinguish between the two. In addition, outdoor SAIs are either pole mounted or pad mounted, and the cost for each is different. The type used correlates to a high degree to the type of distribution plant that is placed (i.e., pole mounted for aerial and pedestal for buried). In many urban areas, the SAI can be mounted outside on a rear wall or pedestal or inside the building (typically in the basement). The selected mechanism should have an input that specifies the percentage of each type.

III.C.6 Depreciation Input Values (paras. 152-153)

The Commission should not use its currently-prescribed depreciation rates in a proxy model. The depreciation rates that the Commission has prescribed for a monopoly environment do not reflect the forward-looking costs of providing universal service in a competitive environment where multiple carriers may qualify to be eligible for universal service support. If the Commission adopts a proxy model, it should use forward-looking

[5] It is economical to provide more pairs in a buried environment because the incremental cost of the additional cable facilities is more than offset by the additional placement and restoration costs that would be incurred if those facilities were not present.

depreciation rates based on an analysis of useful lives under competitive conditions where the LEC is not the sole service provider.

Depreciation used for forward looking cost mechanisms should be based on the forward looking economic life of new equipment. The Commission's proposal to use the weighted average of current rates prescribed by the Commission is clearly inappropriate. The current depreciation rates are based on the underlying life and salvage estimates for existing plant, not new plant. The ranges approved by the Commission in Docket 92-296 were based on represcriptions from the early 1990's and clearly do not reflect current life expectations.[6] They do not reflect the forward looking loss in economic value that can be expected as competition increases in the future.

The Commission may not lawfully require states that submit their own universal service cost studies to incorporate the Commission's prescribed depreciation rates if such studies are to be used to determine both state and federal universal service support levels. In the *Universal Service Order*, the Commission required the states that submit cost studies to demonstrate that they use the same studies to determine the amount of intrastate universal service support, and the Commission encouraged the states to coordinate the development of cost studies for unbundled network elements and universal

[6] A more detailed explanation and appropriate parameters can be found in the USTA's January 29, 1997 comments and the attached papers from SPR and TFI in the Access Reform Proceeding, CC Docket No. 96-262.

service support.[7] The states have the right to use their own depreciation rates to establish state rates and state universal service funding.[8] In addition, the depreciation rates that the states have used to establish prices for unbundled network elements are more likely to reflect the useful lives of telephone plant in a competitive environment.

III.C.7(a) Expenses in General, Platform Design and Input Values (paras. 157-158)

There is no best method of including expenses in a proxy model. Any proxy model that applies existing expense ratios to a new, hypothetical network will tend to produce inaccurate results simply because no one has attempted to budget the personnel and facilities needed to support such a network. Given this limitation, the choice of loading factors from existing expense ratios depends on the design of the model. In some cases, it may be appropriate to calculate expenses on a per-line basis, while in other circumstances it may be more accurate to use a ratio of expenses to investment. Likewise, the level of disaggregation of expense factors by type of plant, activity, carrier, or area will depend on the methodology underlying the model. For example, carriers normally use a loading factor of maintenance expense per dollar of investment in developing direct costs for new service tariff filings.

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[7] ***See*** In the Matter of Federal-State Joint Board on Universal Service, CC Docket No. 96-45, Report and Order (rel. May 8, 1997), at para. 251.

[8] ***See*** *Louisiana PSC v. FCC,* 476 U.S. 355 (1986); 47 U.S.C. Sections 152(b), 254(f).

This method produces reasonably accurate results when used in conjunction with actual plant investment, since it will tend to account for total maintenance costs when applied consistently to all services. However, it fails when, as with the Hatfield model, it is associated with an artificially low level of investment, since maintenance costs vary with the type and amount of equipment, not with the dollar cost of the equipment. Loading expenses on a per-line basis, as the BCPM does, is more accurate in these circumstances, but it may not reflect the fact that per-line maintenance costs will vary with the type of plant. Consequently, the method of loading expenses for each type of plant must be examined to determine if it produces reasonable results given the structure of the model.

III.C. Other (para. 173)

If the Commission adopts a proxy model to calculate universal service support, it should not adjust the results of the model each year to reflect the impact of inflation and industry average productivity improvements. Since the model would be based on forward-looking costs, it would already incorporate expected efficiency improvements and the latest cost inputs. After a few years, the Commission should reevaluate the results of the proxy model and consider alternatives in light of changes that are likely to occur in the industry as competition accelerates and new carriers enter the local exchange market.

III.D Support Area Platform Design (para. 176)

Universal service support should not be based on geographic areas smaller than a wire center. The proxy model sponsors have not shown that they can accurately identify customer lines, and the associated costs, for smaller areas such as census block groups ("CBGs") or census blocks ("CBs"). Carriers have accurate line counts by wire center, but they do not associate lines with CBGs or CBs. Calculating universal service support at the CBG or CB level will produce artificial costs that will underestimate or overestimate the amount of support needed for universal service in a given area. In addition, efforts to validate the results of the models below the wire center will prove to be problematic, since the LECs do not have actual data at that level to compare to the results of the models.

Although the model proponents are aggressively pursuing the feasibility of coding customer lines by geographic location (so-called "geo-coding"), they have not demonstrated at the Commission workshops that this can be done accurately. The geo-coding software that is available commercially has limitations. For example, geo-coding databases often rely on telephone directory listings. Therefore, they exclude unlisted customers which, in some states, may represent a high percentage of residential customers. In addition, incorporating the results of the geo-coded data into the models has resulted in a significant number of data points being missed and, as in the case of the

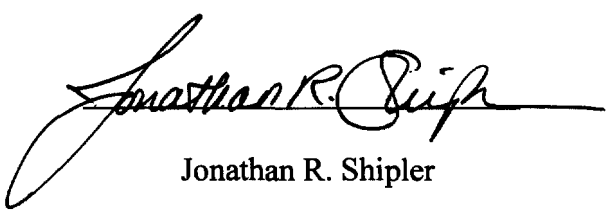
Hatfield Model, replaced with artificial surrogate points. Neither of the model sponsors has shown that costs can be estimated reliably below the wire center level.

While costs may be developed by wire center, the Commission should develop support levels based on larger areas that correspond to the level of disaggregation of rates for unbundled network elements ("UNEs"). Since the Commission has decided that a carrier who provides service through UNEs is entitled to be eligible to receive universal service support,[9] the level of support per-line should be the same throughout an area where UNE prices are averaged.

[9] ***See*** In the Matter of Federal-State Joint Board on Universal Service, CC Docket No. 96-45, Report and Order (rel. May 8, 1997), at para. 154.

CERTIFICATE OF SERVICE

I hereby certify that on this 17th day of October, 1997, a copy of the foregoing "Comments of Bell Atlantic On Inputs, Expenses, and Other Issues" was served by first class U.S. mail, postage prepaid, on the parties listed on the attached service list.



Jonathan R. Shipler

* BY HAND

The Honorable Reed Hundt, Chairman *
Federal Communications Commission
1919 M Street, N.W.
Room 814
Washington, DC 20554

The Honorable David Baker,
Commissioner
Georgia Public Service Commission
244 Washington Street, SW
Atlanta, GA 30334-5701

The Honorable Rachel B. Chong, *
Commissioner
Federal Communications Commission
1919 M Street, N.W.
Room 844
Washington, DC 20554

The Honorable Sharon L. Nelson,
Chairman
Washington Utilities and Transportation
Commission
1300 South Evergreen Park Dr., SW
P.O. Box 47250
Olympia, WA 98504-7250

The Honorable Susan Ness, *
Commissioner
Federal Communications Commission
1919 M Street, N.W.
Room 832
Washington, DC 20554

The Honorable Laska Schoenfelder,
Commissioner
South Dakota Public Utilities Commission
State Capitol, 500 East Capitol Street
Pierre, SD 57501-5070

The Honorable James H. Quello, *
Commissioner
Federal Communications Commission
1919 M Street, N.W.
Room 802
Washington, DC 20554

Martha S. Hogerty
Missouri Office of Public Council
301 West High Street, Suite 250
P.O. Box 7800
Jefferson City, MO 65102

The Honorable Julia Johnson, Chairman
Florida Public Service Commission
2540 Shumard Oak Blvd.
Gerald Gunter Building
Tallahassee, FL 32399-0850

Tom Boasberg *
Office of the Chairman
Federal Communications Commission
1919 M Street, N.W.
Room 814
Washington, DC 20554

Charles Bolle
South Dakota Public Utilities
Commission
State Capitol, 500 East Capitol Street
Pierre, SD 57501-5070

Deonne Bruning
Nebraska Public Service Commission
300 The Atrium, 1200 N Street
P.O. Box 94509-4927

James Casserly *
Commissioner Ness' Office
Federal Communications Commission
1919 M Street, N.W.
Room 832
Washington, DC 20554

Rowland Curry
Texas Public Utility Commission
1701 North Congress Avenue
P.O. Box

Bridget Duff, State Staff Chair
Florida Public Service Commission
2540 Shumard Oak Blvd.
Tallahassee, FL 32399-0850

Kathleen Franco *
Commissioner Chong's Office
Federal Communications Commission
1919 M Street, N.W.
Room 844
Washington, DC 20554

Paul Gallant *
Commissioner Quello's Office
Federal Communications Commission
1919 M Street, N.W.
Room 832
Washington, DC 20554

Emily Hoffnar, Federal Staff Chair *
Federal Communications Commission
Accounting and Audits Division
Universal Service Branch
2100 M Street, N.W.
Room 8617
Washington, DC 20554

Lori Kenyon
Alaska Public Utilities Commission
1016 West Sixth Avenue, Suite 400
Anchorage, AK 99501

Debra M. Kriete
Pennsylvania Public Utilities Commission
North Office Building, Room 110
Commonwealth and North Avenues
P.O. Box 3265
Harrisburg, PA 17105-3265

Sandra Makeeff
Iowa Utilities Board
Lucas State Office Building
Des Moines, IA 50319

Phillip F. McClelland
Pennsylvania Office of Consumer Advocate
1425 Strawberry Square
Harrisburg, PA 17120

Thor Nelson
Colorado Office of Consumer Counsel
1580 Logan Street, Suite 610
Denver, CO 80203

Barry Payne
Indiana Office of the Consumer Counsel
100 North Senate Avenue, Room N501
Indianapolis, IN 46204-2208

Timothy Peterson *
Deputy Division Chief
Federal Communications Commission
Accounting and Audits Division
2100 M Street, N.W.
Room 8613
Washington, DC 20554

James B. Ramsay
National Association of Regulatory Utility Commissioners
1100 Pennsylvania Avenue, NW
P.O. Box 684
Washington, DC 20044-0684

Brian Roberts
California Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102

Kevin Schwenzfeier
NYS Dept. of Public Service
3 Empire State Plaza
Albany, NY 12223

Tiane Sommer
Georgia Public Service Commission
244 Washington Street, SW
Atlanta, GA 30334-5701

Sheryl Todd *
Federal Communications Commission
Accounting and Audits Division
Universal Service Branch
2100 M Street, N.W.
Room 8611
Washington, DC 20554
(8 Copies)

ITS, Inc.*
1231 20th Street, N.W.
Washington, DC 20036